

### **REMARKS/ARGUMENTS**

The Examiner is thanked for the Office Action mailed December 11, 2008. The status of the application is as follows:

- Claims 1-20 are pending, claims 1-10 have been amended, and claims 11-20 have been newly added;
- The disclosure is objected to;
- The specification is objected to;
- The abstract is objected to;
- Claims 1-10 are rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter; and
- Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vincent et al. ("Watersheds in Digital Space: An Efficient Algorithm Based on Immersion Simulations", IEEE Transactions of Pattern Analysis and Machine Intelligence, Vol. 13, No. 6, June 1991, pp. 583-598) in view of Baatz et al. (US 6,832,002).

The objections and rejections are discussed below.

#### **Claim Informalities**

Claims 2, 3, 4, 5, 6, 7, 8 and 10 have been amended for informalities and not for reasons of patentability.

#### **The Objection to the Specification**

The specification is objected to for missing section headings. Section headings are merely permissible and not mandatory (See 37 CFR 1.77(b); MPEP 608.01(a)). As such, applicants respectfully have not amended the specification to include section headings and requests withdrawal of the objection.

The specification is also objected to as failing to provide proper antecedent basis for the claimed subject matter. More particularly, the Office asserts that there is no antecedent basis in claim 9, lines 3, 6, 8 and 10 for the limitations "means for combining a plurality of pixels", "means for forming a filtered secondary image data set", and "means for forming the rendering

from the secondary image data set". Claim 9 has been amended by deleting the objected to limitations, rendering the foregoing objection thereto moot.

**The Objection to the Abstract**

The abstract is objected to for being more than 150 words. The abstract has been amended to be less than 150 words, rendering the objection thereto moot.

**The Rejection of Claims 1-10 under 35 U.S.C. 101**

Claims 1-10 stand rejected under 35 U.S.C. 101. In particular, the Office asserts that the claimed invention recited in claims 1-8 is directed to non-statutory subject matter not falling within one of the four statutory categories of invention. Similarly, the Office asserts that claim 10 is directed to non-statutory subject matter because the claimed "A computer program" is functional descriptive material and does not define structure that is able to impart functionality to the recited computer program.

Claims 1-8 have been amended to recite statutory subject matter. More particularly, claims 1-8 have been amended to recite that the method is executed on a computer, the computer including computer memory that stores instructions that when executed on the computer, cause the computer to perform the recited method steps. Support for this amendment can be found at least in claim 10, which has been added to the specification herein. Moreover, it is inherent that a computer program executed on a computer is embodied on computer readable medium of the computer such as random access memory during execution. "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.'" (See MPEP 2112 citing *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999)). Persons of ordinary skill in the art would recognize that a computer program executed on a computer is embodied on computer memory of the computer such as random access memory during execution. Accordingly, the rejection of these claims should be withdrawn.

Claim 10 depends from claim 1 which has been amended to recite statutory subject matter. As such, the rejection of claim 10 is moot.

The Office also asserts that claim 9 is directed to non-statutory subject matter because claim 9 appears to define an apparatus using “means plus function” claim language. Claim 9 has been amended by deleting all “means plus function” claim language and inserting structural language as suggested by the Office. Particularly, claim 9 has been amended to recite a device having a computer readable medium encoded with computer executable instructions which, when executed by a computer, cause the computer to perform the recited method. Support for this amendment can be found at least in claim 10 and the new paragraph added after paragraph [0029]. Accordingly, the rejection of this claim should be withdrawn.

**The Rejection of Claims 1-10 under 35 U.S.C. 103(a)**

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vincent et al. in view of Baatz et al. This rejection should be withdrawn because the combination of Vincent et al. and Baatz et al. does not establish a *prima facie* case of obviousness with respect to the subject claims.

The rationale to support a conclusion that the claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed. *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_\_\_ (2007). MPEP §2143.

Amended **claim 1** amended has been to recite a method for the formation of a selective rendering of body structures of an object including, *inter alia*, **forming at least one pixel list** by selection and/or deselection of at least one pixel group in conformity with predetermined criteria; **marking the pixels** of the pixels groups of the **at least one pixel list**; **forming a filtered secondary image data set which includes the marked pixels**; and **forming the rendering** from the secondary image data set, **the marked pixels being rendered separately** in highlighted or suppressed form. The combination of Vincent et al. and Baatz et al. does not teach or suggest the emphasized claim aspects.

The Office concedes that Vincent et al. does not explicitly disclose forming at least one pixel list by selection and/or deselection of at least one pixel group. The Office relies on Baatz et al. to teach this claim aspect (col. 14, lines 23-29; col. 16, lines 15-21; Figs. 2 and 4). The

Office also asserts that Baatz et al. teaches forming a filtered secondary data set in which the pixels of the pixel groups of the at least one pixel list formed are marked (Fig. 1, "step S140", col. 14, lines 6-22). The Office concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vincent et al. by incorporating the method step and means for forming at least one pixel list by selection and/or deselection of at least one pixel group taught in Baatz et al. in order to provide a digital picture processing application that recognizes coherent picture segments, thereby offering substantially more information for a subsequent classification (col. 1, lines 18-29). Applicants respectfully traverse this conclusion.

First, Baatz et al. does not teach or suggest in the cited sections forming at least one pixel list by selection and/or deselection of at least one pixel group in conformity with predetermined criteria as required by claim 1. Instead, Baatz et al. teaches that if a selected picture object and contiguous picture objects are conforming to a selected homogeneity criterion, these picture objects are merged to form a new picture object. For example, a picture object "1" having a picture object "a" as a subpicture object and a picture object "2" having picture objects "b" and "c" as sub-picture objects are merged to form a new picture object "1+2" having picture objects "a", "b" and "c" as sub-picture objects (col. 14, lines 23-29; Fig. 2). In another embodiment, Baatz et al. teaches that it is determined whether picture objects which have been merged to form the selected picture still conform to the homogeneity criterion (col. 16, lines 15-21). If it is determined that the merged picture objects still do not conform, non-conforming partial picture objects of the selected picture object are excluded.

However, neither the new picture object "1+2" formed by merging the sub picture objects "a", "b" and "c" nor the picture object formed by excluding the non-conforming picture objects form a pixel list by selection and/or deselection of at least one pixel group in conformity with predetermined criteria as required by claim 1. Rather, the picture objects formed by merging or excluding subpicture objects are pictures and not a pixel list of selected and/or deselected pixel groups. As such, Baatz et al. fails to teach or suggest forming at least one pixel list by selection and/or deselection of at least one pixel group in conformity with predetermined criteria as required by claim 1.

Next, as Baatz et al. fails to teach or suggest forming at least one pixel list by selection and/or deselection of at least one pixel group in conformity with predetermined criteria, it follows that the combination of Baatz et al and Vincent et al. fails to teach or suggest marking the pixels of the pixels groups of the at least one pixel list, forming a filtered secondary image data set which includes the marked pixels, and forming the rendering from the secondary image data set, the marked pixels in the at least one pixel list being rendered separately in highlighted or suppressed form as required by claim 1. In other words, since Baatz et al. fails to teach or suggest forming at least one pixel list, there are no pixels of at least one pixel group that are marked and which are included in the filtered secondary image data set, and the marked pixels being rendered separately in highlighted or suppressed form.

In view of the foregoing, this rejection should be withdrawn.

Amended independent **claim 9** recites claims aspects similar to those recited in claim 1. As such, the above discussion with respect to claim 1 applies *mutatis mutandis* to claim 9, and this rejection should be withdrawn.

**Claims 2-8 and 10** depend from claim 1 and are allowable at least by virtue of this dependency.

#### **New Claims 11-20**

Newly added claims 11-20 emphasize various aspects. No new matter has been added. The aspects in these claims are absent from the prior art. Entry and allowance of claims 11-20 is respectfully requested.

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**Conclusion**

In view of the foregoing, it is submitted that the claims distinguish patentably and non-obviously over the prior art of record. An early indication of allowability is earnestly solicited

Respectfully submitted,

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